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(54) HEATING METHOD FOR REFRactory MATERIAL THROUGH INDUCTION HEATING

(57)Abstract:

PURPOSE: To enable a stable temperature control to be attained by a method wherein an induction heater composing a closed circuit is arranged adjacent to a refractory material to be heated and the induction heater is heated by an electromagnetic induction heating.

CONSTITUTION: An AC power supply is added to a coil 14 of an induction heating furnace 10 and an alternating magnetic field is generated at an iron core 16. Then, an electromagnetic induction current is produced at an induction heater 22 constituting a resistor line closed coil with an alternative magnetic field. This is applied as a heating source for the refractory material 20. A temperature within a cavity 18 is monitored by a temperature sensor 23, compared with a desired temperature pattern stored in advance in an adjustor 25 and a voltage of a variable voltage source 27 is controlled in response to that result. Since the induction heating is superior to Ni-Cr wire heating through energization in follow-up characteristic and thus a temperature control can be accurately performed.

